



CADENCE

CEQ-783

PREAMP PARAGRAPHIC EQUALIZER // OWNERS MANUAL



Thank you for purchasing the Cadence Model CEQ-783 Pre-amp Paragraphic Equalizer. With proper installation and care the CEQ-783 will provide you with years of performance and reliability.

The CEQ-783 is intended for those who value the acoustic benefits of a multi-band paragraphic equalizer coupled with the power of controlling four amplifier channels and two independent sub woofer channels directly from the automobile dash board.

The CEQ-783 is a passive pre-amp equalizer requiring external amplification to power speakers. It provides 2 channels of front output, 2 channels of rear output, and 2 channels of subwoofer output.

PARAGRAPHIC GRAPHIC EQUALIZATION

Every car interior produces at least one sharp peak or dip in the frequency response that results in highly unnatural sound reduction. But the exact frequency and its level of intensity depend on unpredictable factors such as the size and volume of the interior, type of material used for the interior (cloth, leather, vinyl), whether a window is open or how many passengers are onboard.

Because of these variables, even a multi-band graphic equalizer will not be able to control a particular frequency without unnecessarily affecting others. The listener is therefore faced with either unwanted alterations of frequencies or having unnatural peaks and dips, which might result in boomy bass, muddled vocal range or harsh treble response.

The purpose of the 4 paragraphic frequency bands built into the CEQ-783 is to allow you to tune the basic frequencies in order to correct problems in car responses. Once brought into focus, the problem frequency can then be attenuated or boosted. Precise control is therefore possible over the entire frequency range.

When increasing the boost of any frequency you are actually increasing the output voltage of the equalizer to the amplifier. Please be sure that your amplifier has enough "head room" and is capable of handling the source increase without clipping. It is also important that your speakers are capable of reproducing the frequency range which you have chosen to boost without being over driven. For example, do not attempt to boost a 60Hz signal to a small midrange driver, this will only cause the midrange to burn out. The proper procedure for a successful installation is to incorporate either an electronic crossover or passive crossovers to help control which frequencies will actually reach the proper speakers.

For basic installations in a vehicle with larger speakers in the rear and smaller speakers in the front, utilize the fader control to adjust the amount of power reaching the speakers. By turning the fader more to the rear position, more power will be distributed to the rear speakers, thereby protecting the smaller speakers in the front of the vehicle.

SPECIFICATIONS

Paragraphic Equalizer Frequencies

Band One Center:	50Hz
Band Two Center:	200Hz
Band Three Center:	1KHz
Band Four Center:	20KHz
Equalization Control:	Boost/Cut 18dB
Frequency Response:	30Hz - 250Hz
Total Harmonic Dist.:	<0.05%
Signal to Noise Ratio:	>95dB
Maximum Output Level:	9 Volts RMS
Dimensions:	7" x 1" x 4.25" (WxHxD)

FEATURES AND SPECIFICATIONS SUBJECT TO CHANGE AND OR IMPROVEMENT WITHOUT NOTICE

INSTALLATION / WIRING

INSTALLATION:

The CEQ-783 is designed for in-dash installation directly above or below a standard DIN size radio/CD/MP3 capable head unit. Installation kits are available from your dealer to help you make your installation quick and simple while giving your installation a custom, built-in look.

Brackets and screws are supplied with this unit for under the dash, glove compartment or console installations. Cadence recommends you consult your local auto sound professional or installer for assistance.

WIRING:

The CEQ-783 is equipped with a molex type plug for power, ground and remote connections. Open the screws on top of the connector and insert the wires into the hole located directly below the screw. The CEQ-783 comes standard with a lead of red color wire which is pre-fused. You must use this lead in the 12V+ position.

Before making any electrical connections, we suggest that you disconnect your car battery in order to avoid any shorts or blown fuses.

Use a BLACK colored wire to connect the CEQ-783 GROUND terminal directly to the vehicles chassis.

The RED colored wire with the in-line fuse is for the main power to the CEQ-783. It should be connected to a 12V+ source. This is normally the same power source which your head unit is connected to.

Use an ORANGE or YELLOW colored wire for the remote turn on lead of the CEQ-783. This wire should be connected to the radio's power antenna wire or special remote lead from the radio, so that the CEQ-783 will turn on with the rest of your system.

Please use high quality shielded RCA cables in order to avoid electrical noise problems. We recommend Cadence's United Series RC17P high performance RCA cables. The RCA cables should not be laid next to power or ground wires from the amplifier. This will help isolate electrical noise from getting into the audio system.

OPERATIONAL CHECKS:

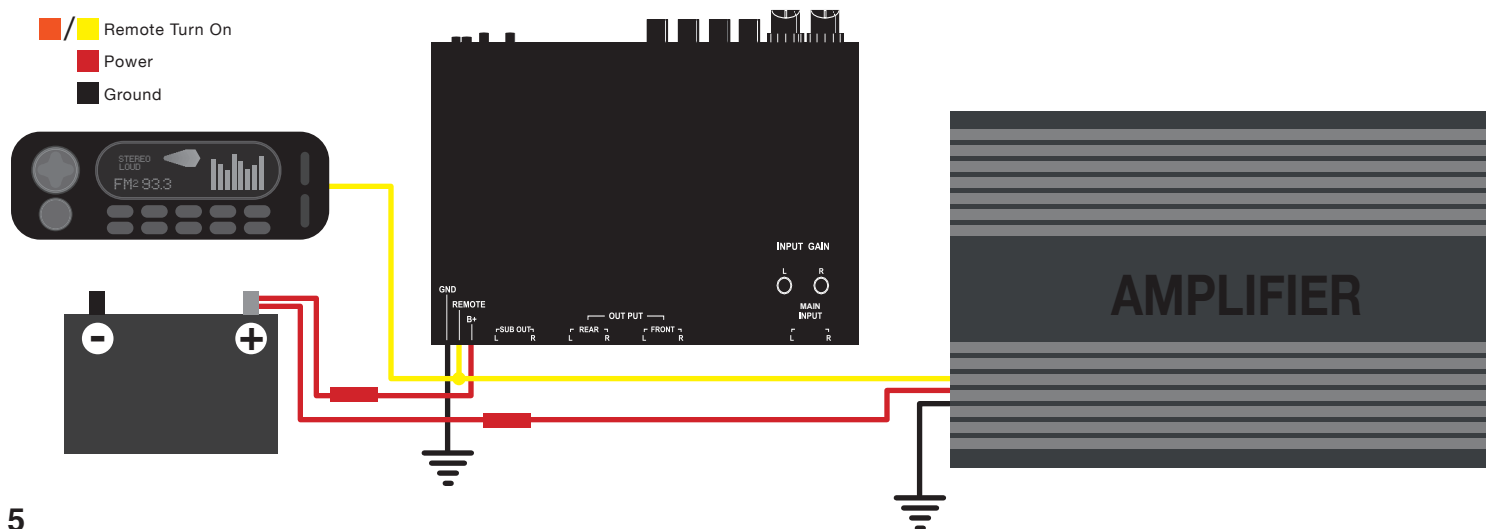
Begin with the radio in the off position. Set the fader and all controls to their center positions. Switch your car ignition or accessory on and turn the radio to low volume. The illumination around the knobs should now be lit. If nothing happens, check for proper power, ground and that the fuse is not blown. If all connections have been verified, check that the remote wire is actually getting power.

To the “do-it-yourselfer”, if you are sure of all your connections and the unit still does not operate properly, we request that you seek qualified help to verify that the installation was done properly before exchanging or sending the unit back for repair.

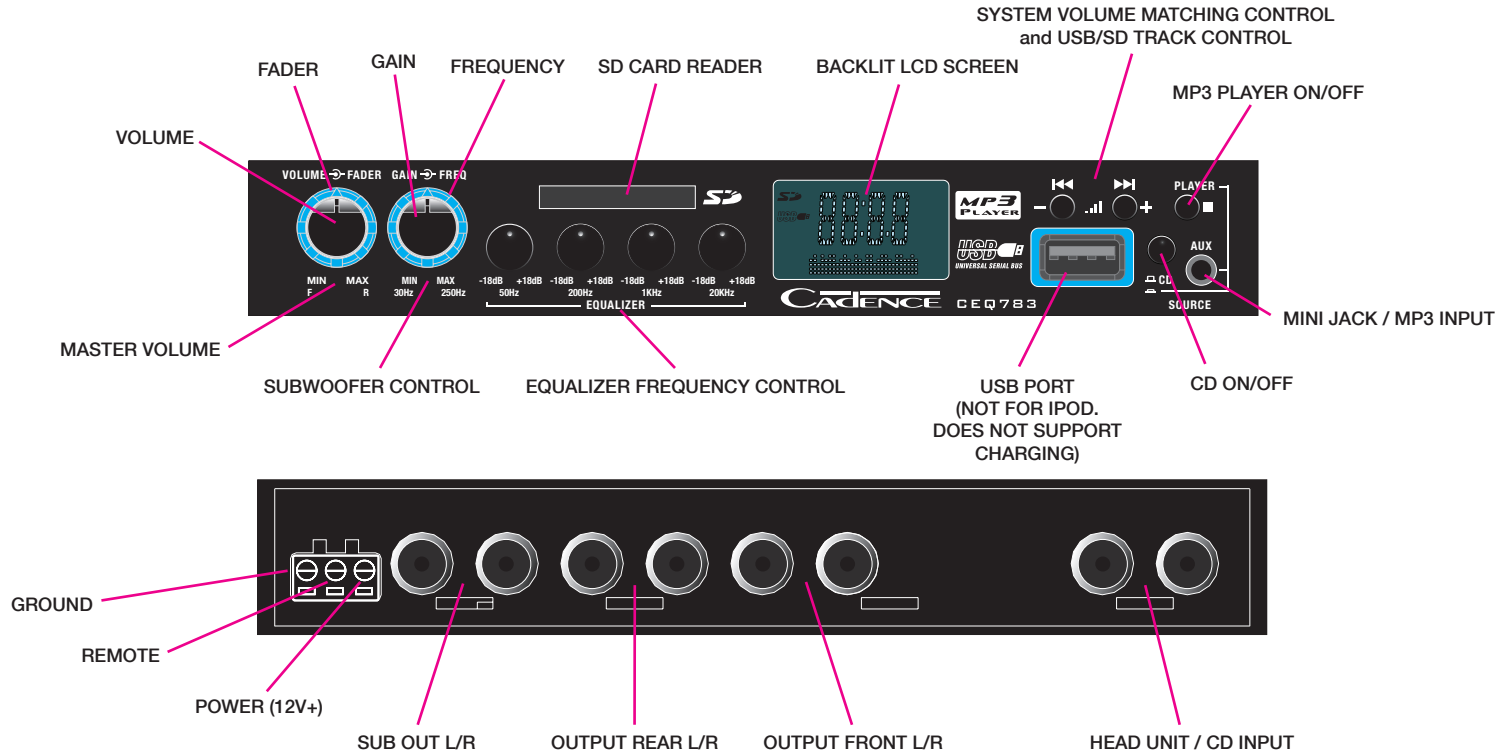
If your system turns on, slowly raise the volume of the CEQ-783. The volume should increase from all of your speakers. Rotate your radio balance in conjunction with the CEQ-783 fader to make sure that the sound is moving correctly from left to right and front to rear. It is important that your radio fader and balance be left in their center positions.

LINE DRIVER:

The CEQ-783 has a built-in DC to DC fully isolated power supply and is capable of producing up to 9 volts of audio output through the RCA preamp connections. The Line Driver feature will guarantee a strong audio signal to the amps and ensure clean distortion free audio reproduction.



CONTROLS, INDICATORS, and TERMINALS



Master Volume:

Inner knob simultaneously raises and lowers the volume of all 4 band levels. Outer ring controls front to rear balancing in a four speaker system.

Subwoofer Control:

The CEQ-783 features separate RCA output for independent subwoofer utilization in the system. The subwoofer channels are stereo and feature an 18dB per octave Butterworth low pass crossover which is fully adjustable from 30Hz to 250Hz. The outer ring controls the crossover frequency while the inner knob adjusts the gain.

Equalizer Frequency Control:

The CEQ-783 allows you to boost or cut up to 18dB the following center control frequencies: 50Hz, 200Hz, 1KHz, 20KH.

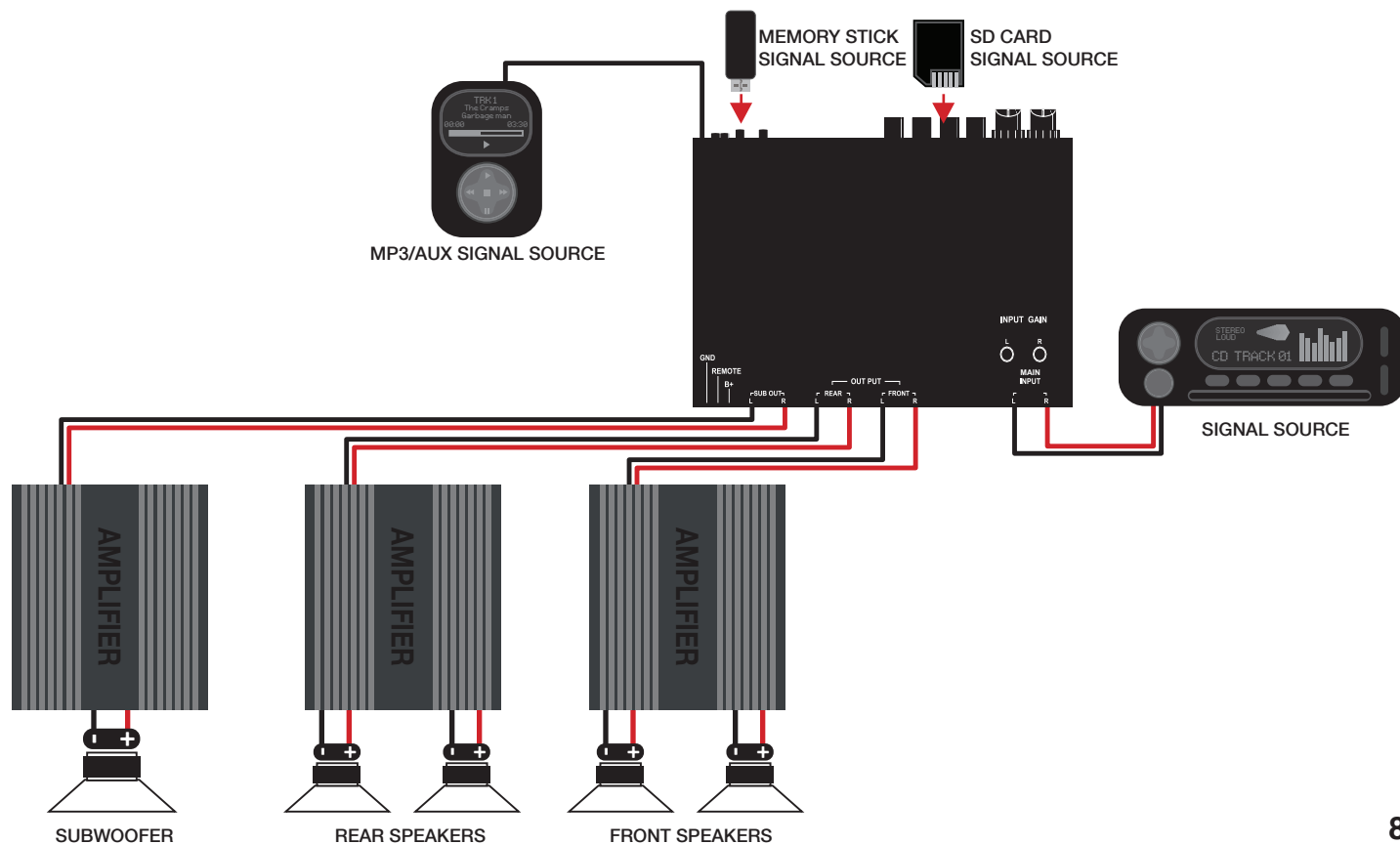
Source Selector:

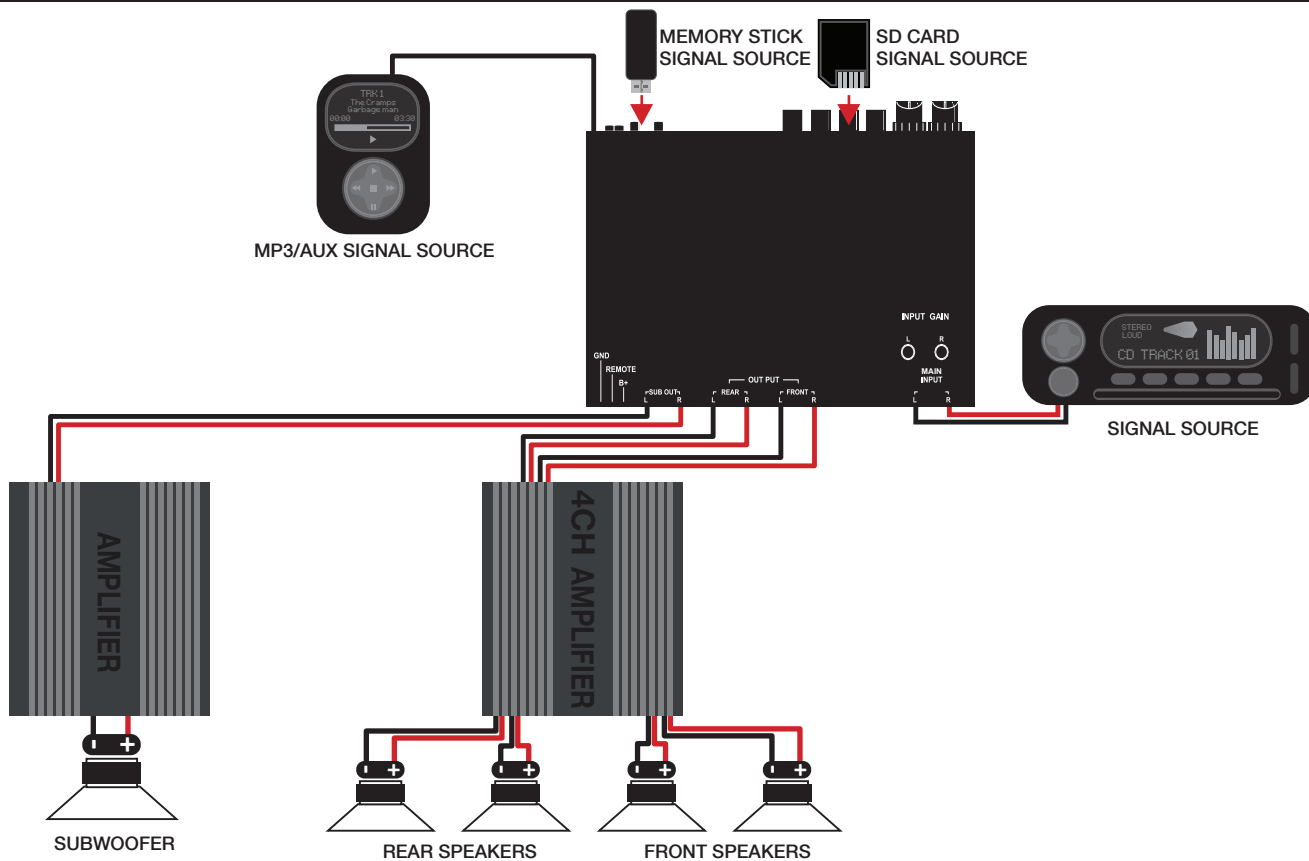
Use the Player button to select between the SD card reader, USB input, or the Mini-jack MP3 input (Aux jack). Push in the CD selector button to listen to CD source or out to listen to MP3 source. Upon inserting an SD card or plugging in a USB device the MP3 player will automatically start playing. Toggle through tracks by using the forward / back arrows at the top right of the unit. Use the the Mini-jack MP3 input (Aux jack) to plug in any MP3 player without USB connectivity. USB port is for memory stick input (does not support iPod; does not support charging).

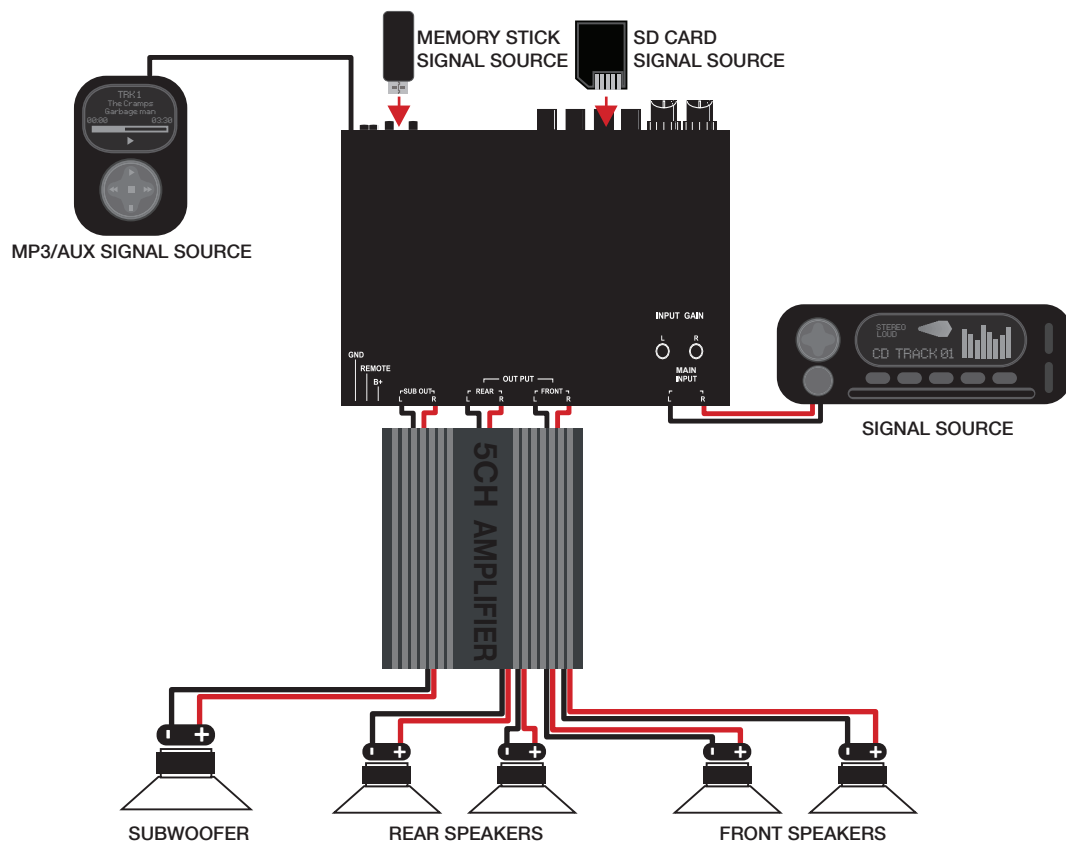
System Volume Matching Control - USB/SD Track Control:

This feature allows the user to control the source input volume to match the overall system volume. Also doubles as track control for USB/SD card input. To use as System Matching Volume Control push and hold either button down to increase or decrease volume level (read out will indicate actual level). To use as track control quickly push either button to go forward or backward.

WIRING DIAGRAMS







FINAL SYSTEM CHECK

Adjusting the System:

Once you are certain that all the wiring is correct and that the unit turns properly you are ready to adjust the audio section.

1. Disconnect the amplifiers remote turn on leads.
2. Adjust all the amplifier gains to minimum.
3. Turn the master volume of the CEQ-783 to maximum.
4. Turn the volume of your head unit to maximum and then down a drop.
5. Switch on any secondary sound source you may have hooked into the CD / Headunit inputs of the CEQ-783. Now adjust just the input level controls found on the top of the unit chassis.
6. Reduce the master volume of the CEQ-783 and reconnect the remote turn on leads to the amplifiers.
7. Restart the system and increase the volume of the CEQ-783 to your desired listening pleasure.
8. The CEQ-783 should be able to run the system even with the amplifier gains set to minimum. If you can not reach your desired listening level you may raise the amplifier gains. Setting amplifier gains unnecessarily to maximum can cause noise problems in your system.

// Features and specifications subject to change and or improvement without notice.
Though we tried our best to ensure that this manual is free and clear of errors please don't hold us responsible for printing errors. //

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